

FIALKOV, Yu.Yu.

Effect produced by chemical interaction in binary systems on the  
viscosity isotherms convex with respect to the composition axis.  
Zhur.fiz.khim. 37 no.8:1757-1762 Ag '63. (MIRA 16:9)

1. Kiyevskiy politekhnicheskij institut.  
(Systems (Chemistry)) (Viscosity)

L 18966-63

EPF(c)/EPR/EWP(j)/EWT(m)/BDS Pc-4/Pr-4/PS-4 RM/JW/MAT

ACCESSION NR: AP3006611

S/0076/63/037/009/1938/1943

AUTHOR: Fialkov, Yu. Ya.

TITLE: Analysis of irrational viscosity isotherms of binary systems

SOURCE: Zh. fizicheskoy khimii, v. 37, no. 9, 1963, 1938-1943

TOPIC TAGS: Irrational isotherm , viscosity isotherm , binary system

ABSTRACT: In an earlier paper, the author pointed out that the deviation ( $\Delta T_{\text{an}}$ ) of an experimental viscosity isotherm from the isotherm calculated on the assumption that no chemical reaction is taking place between the components of the system may serve as a useful means of identifying the composition of compounds in binary systems with irrational viscosity isotherms. Here he uses the method to interpret 2 groups of irrational viscosity isotherms, as exemplified by (group 1) a pyrrole-butyric acid systems and a methylene chloride-acetone system and (group 2) an m-toluidine-acetic acid system, a phenol-trichloroacetic acid system, and a sulfuric acid-monochloroacetic acid system. In many systems, differences in isotherm S values ( $= \nu_{\text{sub } 1} / \nu_{\text{sub } 2}$ ) explain the thermal dis-

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L 18966-63

ACCESSION NR: AP3006611

placement of the maximum in irrational viscosity isotherms. Values calculated separately for each isotherm show that the DELTANu sub max always corresponds to the same rational component ratio. The author suggests that irrational isotherms be divided into "irrational proper" and "pseudo-irrational" isotherms--the latter class comprising those for which the DELTANu sub max matches the rational component ratio. Orig. art. has: 4 tables.

ASSOCIATION: Kievskiy politekhnicheskij institut (Kiev Polytechnical Insitute)

SUBMITTED: 14Feb61

DATE ACQ: 30Sep63

ENCL: 00

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NO REF SOV: 019

OTHER: 005

2/2

Card

FIALKOV, Yu.Ya.

Calculation of the viscosity isotherms of binary systems with noninter-  
acting components. Part 2. Zhur.fiz.khim. 37 no.10:2149-2154 O '63.

(MIRA 17:2)

1. Kiyevskiy politekhnicheskij institut.

FIALKOV, Yu.Ya.

Calculation of the viscosity isotherms of binary systems with  
noninteracting components. Zhur. fiz. khim. 37 no.11:2539-  
2542 N'63. (MIRA 17:2)

1. Kiyevskiy politekhnicheskii institut.

KUDRA, O.K.; ZHITOMIRSKIY, A.N.; FIALKOV, Yu.Ya.

Electric transfer of ions in absolute sulfuric acid. Dokl. AN  
SSSR 151 no.2:377-379 J1 '63. (MIRA 16:7)

1. Kiyevskiy politekhnicheskoy institut. Predstavleno akademikom  
V.I.Spitsynym.  
(Ions—Migration and velocity) (Sulfuric acid)

FIALKOV, Yu.Ya.; SLONINA, V.S.; KARTAVOV, M.S.

Iodine exchange in iodine - iodate systems. Zhur.neorg.khim. 9 no.1:  
214-216 Ja '64.  
(MIRA 17:2)

1. Kiyevskiy politekhnicheskii institut.

FIALKOV, Yu.Ya.; BOROVNIKOV, Yu.Ya.

Relation between the constants of dissociation of acids in acetic acid and the properties of binary systems of the type acetic acid - acids. Ukr.khim.zhur. 30 no.2:119-125 '64. (MIRA 17:4)

1. Kiyevskiy politekhnicheskii institut.



FIALKOV, Yu.Ya., kand. khim. nauk

Radiometric determining of potassium as a method of rapid analysis.  
Khim. prom. no.4:68 O-D '64. (MIRA 18:3)

PIKALOV, Yu.Ye.; P. F. LIL, Yu.A.; KHEIM, O.A.

Systems formed by nitric acid with halogenetic acids. *Dokl. Akad. Nauk SSSR*, 1970, no. 8: 1947-1950. *Abstr.* 164.

(MIRA 17:11)

1. Kievskiy politekhnicheskiy Institut.

FIALKOV, Yu.Ya.; FENERLI, G.N.

Application of the volume properties in the physicochemical  
analysis of the binary liquid systems. Zhur. neorg. khim. 9  
no.9:2231-2238 S '64. (MIRA 17:11)

1. Kiyevskiy politekhnicheskii institut.

KUDRA, O.K.; FIALKOV, Yu.Ya.; ZHITOMIRSKIY, A.N.

Transference numbers in the systems formed by water with sulfuric  
and orthophosphoric acids. Zhur. neorg. khim. 9 no.10:2454-2457  
O '64. (MIRA 17:12)

1. Kiyevskiy politekhnicheskii institut i Institut khimii AN  
Tadzhikskoy SSR.

KUDRA, O.K.; FIALKOV, Yu.Ya.; TARASENKO, Yu.A.

Physicochemical analysis of the systems trifluoroacetic  
acid - indifferent solvent. Ukr. khim. zhur. 30 no.4:

347-353 '64.

(MIRA 17:6)

1. Kiyevskiy politekhnicheskij institut.

PRIKHODCHENKO, V.G.; FIALKOV, Yu.Ya.; TRESKUNOVA, R.L.

Electrodeposition of extrasmall amounts of antimony on mercury.  
Zhur.prikl.khim. 37 no.7:1466-1469 J1 '64.

(MIRA 18:4)

FIALKOV, Yu.Ya.; FENERLI, G.N.

Physicochemical analysis of binary liquid systems with exchange reaction. Zhur. ob. khim. 34 no.10:3146-3153 0 '64.

(MIRA 17:11)

1. Kiyevskiy politekhnicheskii institut.

FIALKOV, Yu.Ya.; TARASENKO, Yu.A.; KUDRA, O.F.

Physicochemical analysis of binary systems formed with formic  
acid and esters. Zhur. ob. khim. 34 no.12:3862-3866 D '64  
(MIRA 18:1)



L 33200-66 EWT(1)/EWT(m) IJP(c) GG  
ACC NR: AR6016219

SOURCE CODE: UR/0058/65/000/011/2008/2008

AUTHOR: Fialkov, Yu. Ya.; Borovikov, Yu. Ya.

TITLE: Dielectric constant of certain binary systems with non-interacting components

SOURCE: Ref. zh. Fizika, Abs. 11E58

REF SOURCE: Vestn. Kiyevsk. politekhn. in-ta. Ser. khim. mashinostr. i tekhnol.,  
no. 1, 1965, 73-79

TOPIC TAGS: dielectric constant, refractive index, liquid property, optic property

ABSTRACT: The authors investigated the dielectric constant  $\epsilon$ , and also the density and refractive index of 12 binary liquid systems made up of non-interacting components. It is found that in systems made up of non-associated components good agreement between the experimental values of  $\epsilon$  and those calculated by the rule of volume-fraction additivity is observed. In systems made up of weakly associated components and non-associated components, the calculation of  $\epsilon$  on the basis of the calculation of the fluctuations of  $\epsilon$  gives good agreement with experiment. [Translation of abstract]

SUB CODE: 20

Card

1/1 pla

FIALKOV, Yu.Ya.; FENERLI, G.N.

Physicochemical analysis of binary liquid systems with exchange interaction. Part 2: Additive properties of model systems. Ukr. khim.zhur. 31 no.2:141-147 '65. (MIRA 18:4)

1. Kiyevskiy politekhnicheskii institut.

FIALKOV, Yu.Ya.; FENERLI, G.N.

Physicochemical analysis of binary liquid systems with exchange interaction. Part 3: Nonadditive properties of model systems.  
Ukr. khim. zhur. 31 no.3:258-263 '65. (MIRA 18:4)

1. Kiyevskiy politekhnicheskii institut.

FIALKOV, Yu.Ya.; ZHITOMIRSKIY, A.N.; KUDRA, O.K.

Report numbers in binary systems formed by sulfuric acid  
with orthophosphoric and monochloroacetic acids. Zhur.neorg.  
khim. 10 no.4:934-938 Ap '65. (MIRA 18:6)

1. Kiyevskiy politekhnicheskoy institut i Institut khimii AN  
Tadzhikskoy SSR.

FIALKOV, Yu.Ya.; CHVIRUK, O.V.; KUDRA, O.K.

Physicochemical analysis of binary liquid systems formed by  
amines. Part 1: Systems diphenylamine-amines. Zhur. ob. khim.  
35 no.9:1523-1529 S '65. (MIRA 18:10)

1. Kiyevskiy politekhnicheskoy institut.

CONFIDENTIAL

Transference numbers as a method of the physicochemical analysis of binary systems. *Zhur. fiz. khim.* 39 no.8: 1962-1966. 4p. 1965. (MIRA 18:5)

1. Leningradskiy politicheskiiy institut i Institut Khimii  
i Mekh. Khim. SSSR.

FLALKOV, Yu.Yu.; TARASENKO, Yu.A.

Effect of viscosity on electroconductivity in binary liquid  
systems. Teoret. i eksper. khim. 1 no.4:473-478 '65.  
(MIRA 18:10)

1. Kiyevskiy politekhnicheskij institut.

PIALKOV, Yu. Ia.; TARASENKO, Yu. A.; ALEKSE, G. K.

Binary systems formed by the acyl complexes of stannic chloride  
with inert solvents. Zhur. neorg. khim. 10 no. 1: 231-236, Jan '65.  
(MIRA 18:11)

1. Kiyevskiy politekhnicheskii institut. Submitted Dec. 23, 1965.



POLAND

FIALKOWSKI, Konrad

Dept. of Computer Construction, Warsaw Polytechnic (Katedra  
Budowy Maszyn Matematycznych, Politechnika Warszawska)

Warsaw, Archivum automatyki i telemechaniki, No 1, Jan/Mar 1966,  
pages 79-83

"Multiplication and division algorithms in two component binary code  
with radix - 2."

L 13227-66 EWP(j)/EWA(o)

RM

ACC NR: AP6006038

SOURCE CODE: CZ/0053/65/01A/001/0292/0292

AUTHOR: Elis, J.; Cerey, K.; Fialova, O.; Rybova, B.; Sechser, T.

ORG: Institute of Pharmacology, CSAV, Prague (Farmakologicky ustav CSAV)

TITLE: Effect of 6-azacytidine on pregnancy in mice [This paper was presented during the Twelfth Pharmacologic Days, Smolenice, 27 Jan 65.]

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 292

TOPIC TAGS: mouse, biologic reproduction, drug effect, pharmacology, heterocyclic base compound, organic nitrogen compound

ABSTRACT: Administration of 2 mg /Kg i.v. of 6-azacytidine to pregnant mice interfered with trophoblast, thus causing resorption of 88% of the embryos. Data on the dosage, times and intensity of effect are given. [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 001

Card 1/1

BOROVIKOV, Yu.Ya.; FIALKOV, Yu.Ya.

Dielectric constant of some binary liquid systems with high  
electric conductivity. Elektrokimiia 1 no.9:1106-1109 S '65.  
(MIRA 18:10)

1. Kiyevskiy politekhnicheskii institut.

SHCHUKAREV, S.A.; BALICHEVA, T.G.; PARASENKO, Yu.A.; FIALCOV, Yu.Ya.

Infrared spectra of binary systems formed by sulfuric acid  
with acetic and chloroacetic acids. Zhur.neorg.khim. 10  
no.12:2723-2727 D '65. (MIRA 19:1)

1. Leningradskiy gosudarstvennyy universitet i Kiyevskiy  
politekhnikheskiy institut.

FIALKOV, Yu.Ya.; TSENDROVSKAYA, V.A.; KUDRA, O.K.

Temperature viscosity coefficients of binary systems. Ukr.  
khim. zhur. 31 no. 12:1267-1275 '65 (MIRA 19:1)

1. Kiyevskiy politekhnicheskij institut. Submitted February 24,  
1964.

PIALECV, Ye.Ya.; AKSENOVA, V.B.

Sulfur exchange in the system sulfide - sulfate. Zhur.naorg.  
khim. 11 no.1:215-216 Ja '66. (MIRA 19:1)

1. Kiyevskiy politekhnicheskii institut. Submitted April 9,  
1965.

MAZDOROV, V.; FIALKOVA, V., redaktor.

[Inventorying materials in industrial enterprises] Uchet materialov  
v promyshlennykh predpriatiakh. Moskva, Gosfinizdat, 1953. 67 p.  
(V pomoshch' khesialstvennomu aktivu predpriatii). (MLRA 7:3)  
(Inventories)

KIRILLOV, I.A., prof.; BORODIN, S.V.; VINOKUR, R.D.; VOSKRESENSKIY, A.A.;  
GIROVSKIY, V.F.; ZHITOMIRSKIY, E.G.; SAFRAY, G.Ye.; SYCHEV, N.G.;  
NIKITIN, N.D.; FILATOV, N.L.; FIALKOVA, V., red.; LEBEDEV, A.,  
tekhn.red.

[Finances of branches of the national economy] Finansy otraslei  
narodnogo khoziaistva. Avtorskii kollektiv pod rukovodstvom  
I.A.Kirillova. Moskva, Gosfinizdat, 1958. 302 p. (MIRA 12:2)  
(Finance)



JEDLICKA, J.; JAROSOVA, V.; FIALOVA, V.

Factors influencing the electrocardiogram in chronic pulmonary heart disease. Acta Univ. Carol. [med.] (Praha) 10:suppl. 17: 71-78 '63

I. Kardiologická laborator, II. interní klinika a II. chirurgická klinika fakulty všeobecného lékařství University Karlovy v Praze.

FIALOVA, V.; JEZEK, V.; OUREDNIK, A.; KROUZKOVA, L.

The effect of hypoxemia and respiratory acidosis on the electrocardiogram in chronic cor pulmonale. Sborn. lek. 67 no.5:140-145 My'65.

1. II. interni klinika fakulty vseobecneho lekarstvi University Karlovy v Praze a kardiologicka laborator fakulty vseobecneho lekarstvi University Karlovy v Praze (prednosta: prof. dr. F. Herles, DrSc.).

34439

9.4177(1035,1051)

S/185/61/006/006/019/030  
D299/D304

26.2420

AUTHOR: Fialkovs'ka, O.V.

TITLE: Infrared absorption-spectrum of germanium with iron impurities

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 6, 1961,  
822 - 827

TEXT: The absorption spectra were studied of single crystals of "pure" germanium, as well as of germanium with iron impurities, having different (n and p)-type conductivity, over a large temperature interval (473 to 200K), in the 2.5 - 14  $\mu$  range (0.6 - 0.08 eV). Mainly low-ohmic specimens of short lifetime were studied. The presence of the impurity (of the order of  $4 \cdot 10^{13}$  -  $10^{14}$  atom/cm<sup>3</sup>) was controlled by the changes in conductivity. In the absorption spectrum of pure germanium, continuous absorption was observed. In the absorption spectrum of n-type Ge (with Sb-impurity), no intensive absorption bands could be observed at 293 and 200K. In the absorption spectrum of p-type Ge (Fe impurity), at 293<sup>0</sup>K, an absorp-

Card (1/4)

X

Infrared absorption-spectrum of ...

S/185/61/006/006/019/030  
D299/D304

tion band appeared at  $4.6 \mu$  (0.27 eV), as well as another, very broad, band at  $2.9 \mu$  (0.36 eV), having several weak maxima. A temperature drop from 293 to 20°K, led to a sharp change in the spectra -- the absorption band  $4.6 \mu$  disappeared completely, but a very strong absorption band appeared at  $3.9 \mu$  (0.32 eV). In order to ascertain the nature of the observed absorption bands, a number of investigations were carried out. It was found that lattice dislocations play no part in the observed phenomena. An investigation of absorption spectra of Ge with Ga-impurity (p-type), showed that the absorption band  $3.9 \mu$  appears also in this case, provided the Ga concentration is maximal. Further, the influence of annealing was studied on p-type Ge (with Fe-impurity). Repeated annealing of the specimen led to an increase in resistivity to  $3.4 \text{ ohm}\cdot\text{cm}$ , and to the disappearance of the  $4.6 \mu$ -band. The  $3.9 \mu$ -band remained. Hence, the conclusion that the observed absorption bands are of a different nature. Further, the temperature dependence of the absorption spectra was studied. A lowering of temperature was accompanied by an unequal shift in the longwave- and shortwave sides of the absorption band -- namely, the shortwave side was shifted at a faster ra-

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Infrared absorption-spectrum of ...

S/185/61/006/006/019/030  
D299/D304

te. The longwave band is investigated in more detail; it was found to be of a complex nature, its behavior being non-monotonous with respect to intensity as well as to shift in the absorption maximum. This results is of interest, being obtained for the first time; it is apparently related to 2 different transitions (near in frequency) Further, the observed effects are interpreted from the point of view of energyband theory. The 0.36 ev band can be interpreted as free-carrier absorption, due to transitions inside the valence band. Introduction of Ga-impurities in Ge, leads to the formation of an additional 0.01 ev level in the vicinity of the valence band. The observed increase in absorption intensity at lower temperatures, is due to a redistribution of holes. The author compares his results to those obtained by Western investigators (Ref. 5: H. Briggs, R. Fletcher, Phys. Rev., 87, 1130, 1952; 91, 1342, 1953); (Ref. 6: R. Newman, Phys. Rev., 96, 1188, 1954). With respect to the 0.36 ev-bands, the results were in agreement; the author however, observed an additional band (0.32 ev). Above 100°K, it can be assumed that absorption, due to electron transitions from the upper part of the valence band, is superposed on hole-absorption. At 293°K, an absorp-

Card 3/4

Infrared absorption-spectrum of ...

S/185/61/006/006/019/030  
D299/D304

tion band (0.27 ev) was observed, whose intensity depends on the heat treatment. This is in agreement with the results of other Soviet investigations. There are 6 figures and 6 references: 2 Soviet bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: W. Tyler, H. Woodbury, Phys. Rev. 96, 874, 1954; R. Newman, W. Tyler, Phys. Rev., 96, 882, 1954; H. Briggs R. Fletcher, Phys. Rev. 87, 1130, 1952; 91, 1342, 1953; R. Newman, Phys. Rev., 96, 1188, 1954.

ASSOCIATION: Instytut fizyki AS UkrRSR (Institute of Physics of the AS UkrRSR, Kyiv)

Card 4/4

X

FIALKOVSKAYA, O.V. [Fialkovs'ka, O.V.]

Infrared absorption spectrum of germanium doped with iron.  
Ukr.fiz.zhur. 6 no.6:822-827 N-D '61. (MIRA 16:5)

1. Institut fiziki AN UkrSSR, Kiyev.  
(Germanium—Spectra)

Ca

3

The spectral distribution of the sensitivity of cuprous  
sulfide photocells and their use for spectrometric measure-  
ments. O. Polkovskaya. *Sov. phys. abstr.* 4, 33-41  
(1955). *Therm. Tech.* 1956, 11, 2101. Cuprous sulfide  
photocells were prepared by reduction in hot aq. glycerol  
solutions of varying concns. (20, 40, 60 and 100 drops glycerol  
per 100 cc. water). The spectral sensitivity of elements so  
prepared varies and is optimum in the case of those prepared  
with 40 drops of glycerol per 100 cc. water. On the curve  
for the optimal element the max. sensitivity is at about  
6500 Å; when 100 drops of glycerol are used, the max. is  
shifted by 400-500 Å. toward the infrared; with 60 drops  
the sensitivity in the infrared region is even neg. A 2nd  
max. lies at about 7500 Å. Because of such fluctuations  
in the sensitivity of the photoelements in various spectral  
regions, these elements cannot be used for photometric  
evaluation of sources of white light with different energy  
distributions. However, because of their high spectral  
sensitivity they are very convenient for work with mono-  
chromatic light in detg. absorption of other optical proper-  
ties of materials.

M. G. Mironov

ASD 11A DETAILING LITERATURE CLASSIFICATION



**Absorption spectra of neodymium solutions in ordinary and in distilled water.** O. V. Fialkovskaya and S. M. Katchenkov. *J. Exptl. Theoret. Phys.* (U. S. S. R.) 8, 288-60 (1938).—When heavy water replaces ordinary water as solvent, the  $Nd^{++}$  bands of  $Nd_2(SO_4)_3$  soln. shift toward the violet. The shift is less at higher temp. by  $\lambda = 4.9, 4.0, 7.35$  and  $9.0$  Å. for the lines 3467, 3467, 3440, 3473 and 4755 Å., resp. F. H. R.

SA

719. Absorption Spectra and Fluorescence of Heterocyclic Compounds. Q. V. Plakoyshko. *Acta Physicochimica*, 9, 2, pp. 216-224, 1938. In English.—The absorption spectra and the fluorescence of heterocyclic compounds of pyridine, indol, furane, thiophene, chinolin and pyrrol in their vaporous state have been examined in a small interval of pressures, from about  $10^{-6}$  mm. Hg and upwards. The first four substances exhibited characteristic absorption band spectra. The absorption spectrum of chinolin is somewhat more diffuse. Fluorescence has been detected only in indol and chinolin and represents a wide spectral region with marginal diffusion.

#### AUTHORS

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ASTM-5.1A METALLURGICAL LITERATURE CLASSIFICATION																									
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SYNONYM													BROWSE												
<p>The absorption spectra and fluorescence of heterocyclic compounds. O. V. Pivkovskaya. <i>J. Phys. Chem.</i> (U. S. S. R.) 11, 433-45 (1958). Pyridine, indole, thiophene and furan (all in vapor state) have narrow absorption lines besides the regions of complete absorption. Quinoline has somewhat obscured absorption bands, and pyrrole very likely has no narrow bands in the absorption spectrum, although this is still questionable. Among all these, fluorescence was observed only in the compds. that have a benzene ring as a component of their structure, but even these compds. (indole and quinoline) have no discrete structure of the fluorescence spectrum, as has <math>C_{10}H_8</math>, but only one wide, rather diffuse band. Indole having narrow absorption bands, has more clearly indicated fluorescence than quinoline, which has a more diffuse absorption spectrum and less intensive fluorescence. Thus, the fluorescence presumably is due to the presence of a benzene ring in the structure of heterocyclic compds. Data are tabulated.</p> <p>A. A. Podgorny</p>																									

PROCESSES AND PROPERTIES INDEX																									
1ST AND 2ND GROUPS													3RD AND 4TH GROUPS												
<p><b>Absorption spectra of neodymium sulphate in light and heavy water.</b> O. FIALKOVYAKOVA and S. KATCHENKOV (Acta Physicochim. U.R.S.S., 1939, 10, 379-382).-- Comparison of the absorption spectra of <math>Nd_2(SO_4)_3</math> in <math>H_2O</math> and <math>D_2O</math> shows that for <math>D_2O</math> the bands are shifted towards the violet, the shift decreasing with rise of temp. F. J. G.</p>																									
<p>AS 11-51A METALLURGICAL LITERATURE CLASSIFICATION</p>																									
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<p>4675. A new absorption band in alkali halide phosphors activated by thallium. PALKOVSKAYA, O. V. <i>Dokl. Akad. Nauk, SSSR</i>, 66 (No. 1) 49-52 (1948) <i>In Russian</i>.—The addition of TlCl to KCl crystals leads to an absorption band at 2475 Å which is due to TlCl and increases with its concentration, and also to a new band at 2730 Å which is not detectable at 0-05 mol.% TlCl even in 5-0 mm layers and which is constant in intensity from 0-15-5 mol.% TlCl. This band, observed using 15 min exposures with a H lamp and a Leica spectrograph, is insensitive to temp., shifting only 100 Å to the red at 500° C. The band is almost absent in polycrystalline samples. In measurements with a Beckmann spectrophotometer which requires a much reduced exposure of the sample to u.v. radiation the band is greatly reduced. It is suggested that electrons expelled by general u.v. light, as in the production of F-centres in pure KCl, are trapped by the Tl<sup>+</sup> ions and that Tl atoms are responsible for the new band. In polycrystalline materials, surface irregularities compete for the electrons and less Tl atoms are formed. The band at 3000 Å in the KBr + TlBr system is analogous.</p>																																																			
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1ST AND 2ND GROUPS		PROCESSING AND PROPERTIES INDEX		1ST AND 2ND GROUPS	
<p><b>Emission spectra of mixed alkali halide phosphors.</b> (1)  V. Flakovsky (Leningrad State Univ.). <i>Doklady Akad. Nauk S.S.S.R.</i> 60, 576-N(1948); cf. C.A. 42, 6671a. The phosphorescence spectra of TlCl-activated mix crystals of KCl + KBr, KCl + KI, KCl + RbCl, KCl + CsCl, were investigated in view of ascertaining the effects of varying the cations and anions of the matrix lattice, of variations of the lattice const., and, in the case of KCl + CsCl, of mixing crystals with face-centered and body-centered lattices. The phosphors were prepd. by fusing finely ground and mixed equimol. amts. of the 2 salts, with 0.5 mol. % TlCl. Thus prepd., the KCl + KI + TlCl phosphor showed 2 emission max., identical with the max. of the simple KCl + TlCl and KI + TlCl; the analogous phosphor prepd. by simple mixing of the powders, without fusion, showed only one max., that of KI + TlCl, i.e., that of the salt with the greater lattice const. KCl + CsCl + TlCl shows very distinctly the max. of CsCl + TlCl and only a hint of the max. of KCl + CsCl; here, because of the great difference of the lattices of KCl and of CsCl, no regular mix crystal is obtained, even on fusion, and the activator is mainly concd. in the lattice with the greater const. In KCl + RbCl + TlCl, because of the relatively slight difference of the lattice const. of KCl and RbCl, only one max. is observed, about half-way between the positions of the max. of the single KCl + TlCl and RbCl + TlCl; in this case, the activator evidently emits in an "averaged" field of the solid soln. KCl + RbCl. Similarly, KCl + KBr + TlCl shows one single max., in a position roughly half-way between the max. of KCl + TlCl and KBr + TlCl; the band shows some doublet structure, as does that of KBr + TlCl. The phosphorescence spectrum of a mix crystal thus provides a criterion permitting decision whether the given solid system forms a true mix crystal or only a polycryst. mixt.</p>					
<p>3</p>					
<p>15-514 METALLURGICAL LITERATURE CLASSIFICATION</p>					
<p>15-514 METALLURGICAL LITERATURE CLASSIFICATION</p>					

TERMININ, A.N., akademik; FIALKOVSKAYA, O.V., starshiy nauchnyy sotrudnik.

Exchange of electrons between the adsorbed molecules and the  
catalyzer. Nauch.biul.Len.un. no.23:8-10 '49. (MLRA 10:4)

1. Fizicheskiy institut Leningradskogo ordena Lenina Gosudarstven-  
nogo universiteta.  
(Electrons)

Absorption spectra of neodymium nitrate in different binary solvents. O. V. Piskovskaya (A. A. Zhdanov State Univ., Leningrad). *Doklady Akad. Nauk S.S.S.R.* 74, 409-72(1950). — The spectra were detd. in soln., 80 mg./cc., in H<sub>2</sub>O, in mixts. of H<sub>2</sub>O with 10, 40, 60, 80 wt. % MeOH, and in pure MeOH. With 10% MeOH, the spectrum is no different from that in H<sub>2</sub>O, except for a slight shift of the 3467- and 3548-Å. lines to the visible. With 40% MeOH, an addnl. new component appears, obviously due to MeOH; that component grows in intensity with increasing MeOH, while the H<sub>2</sub>O components become increasingly weaker, disappearing almost completely at 80% MeOH. The MeOH component moves increasingly towards the visible and becomes increasingly broader with increasing MeOH. Similar effects are observed with H<sub>2</sub>O-Me<sub>2</sub>CO and with H<sub>2</sub>O-dioxane mixts. This leads to the conclusion that the binary solvents behave not like true solns, but rather like emulsions, in the sense of the presence of distinct cybotactic groups of MeOH and of H<sub>2</sub>O; some Nd<sup>+++</sup> ions are solvated with H<sub>2</sub>O, others with MeOH, in a proportion depending on the compn. of the solvent. The wave-length shift,  $\Delta\lambda$ , towards the visible increases with the content of the nonaq. component, from 20% upwards; in the case of H<sub>2</sub>O-dioxane, the rate of that shift shows a very steep increase at about 50%. In terms of the dielec. const. of the mixed solvent,

$\Delta\lambda$  is proportional to  $1/\epsilon^2$  at low  $\epsilon$ , i.e. at low H<sub>2</sub>O contents, whereas with further increasing  $\epsilon$ , i.e. increasing H<sub>2</sub>O content,  $\Delta\lambda$  decreases rapidly and draws close to the axis of abscissas. Consequently, electrostatic interaction between Nd<sup>+++</sup> and the medium, in the sense of Debye's theory, plays a detg. role only at low H<sub>2</sub>O contents, whereas in H<sub>2</sub>O-rich solvents the situation is much more complex as a result of hydration. N. Thom



C.2  
1951

**Photoreaction of pyridine in the adsorbed state.** O. Ya. Fialkovskaya and A. N. Terenin (A. A. Zhukov State Univ., Leningrad) *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1951, 220-41; cf. C.A. 44, 6721k, 7147f. — Pyridine adsorbed from the vapor *in vacuo* on dry outgassed granular silica gel, in an amt. well below that corresponding to complete coverage (much less capillary condensation), exposed 2 hrs. to a Zn spark rich in ultraviolet (3000-2000 Å), showed no visible changes. On a plate of vitreous silica aerogel, 2 hrs. exposure of the pyridine adsorbate produced a light-brown spot, which did not disappear on heating to 500° *in vacuo*. As the aerogel could not be heated above 150°, it is legitimate to assume that it did contain traces of  $O_2$  and  $H_2O$ , and that the colored product formed under these conditions was identical with Frevig's (C.A. 27, 721; 32, 2839) "photopyridine" (I) characterized by an absorption in the range 4000-3000 Å, with max. at 3500 Å. A different colored product is formed when pyridine is illuminated while adsorbed on silica gel contg.  $Ti^{3+}$  ions, introduced by impregnating the silica gel with an ammoniacal soln. of  $TiCl_3$  (10%  $TiCl_3$  with respect to the silica); actual penetration of the  $Ti^{3+}$  ions into the lattice of the silica gel (in addition to inclusions of  $TiCl_3$  microcrystals, evidenced by x rays) is demonstrated by the bright-blue fluorescence of the system in excitation with the Zn spark. Two hrs. exposure of the  $SiO_2$ - $TiCl_3$  system alone to a Zn spark produced no visible changes. However, with pyri-

dine vapor adsorbed prior to the exposure, a yellow spot appeared after 10 min. illumination and became very bright after 1 hr. The color disappears on mild warming with air of about 50°, but reappears with the original intensity on repeated illumination of the same spot. The same effects are observed with a picoline, with the color appearing 2-4 times as fast as with pyridine. This yellow photoproduct (II) is formed in the absence of either  $O_2$  or  $H_2O$ , and has a max. of absorption at 4250 Å; consequently, it is different from I. The yellow color II was obtained also, within 30 min., on illumination of an adsorbate of pyridine on a prepn. made by mixing still-hot silica gel (previously heated to 800°) with  $TiCl_3$  (1  $TiCl_3$ :10  $SiO_2$  gel by wt.), and heating 4 hrs. to 300°, a method ensuring complete outgassing. The different natures of I and II follow also from the fact that II can be obtained only in the presence of  $TiCl_3$ . The yellow II is produced only on illumination with wave lengths shorter than 2558 Å. That wave length corresponds to the max. of absorption of pyridine in  $C_6H_6$  soln., but also to max. absorption of thin layers of  $TiCl_3$ . That the photoreaction is due to absorption of light by pyridine only, and not by  $TiCl_3$ , is proved by the observation of the same threshold wave length with other II salts, with absorption spectra different from  $TiCl_3$ , namely  $Ti_2SO_4$ ,  $TiNO_3$ , and  $TiClO_4$ , the latter being transparent in that wave-length range. Consequently, the photoreaction producing II is due to absorption of light by pyridine, and requires the presence of  $Ti^{3+}$  ions, no matter in what form they are introduced. The photoreaction still takes place if  $TiCl_3$  is strongly diluted by KCl, e.g. when the silica gel is mixed with a sublimate-phosphor KCl + 0.05%  $TiCl_3$ . On the other hand, there is no photoreaction with pyridine adsorbed on sublimed films of  $TiCl_3$ , not supported on silica gel; consequently, the reaction hinges on the presence of  $Ti^{3+}$  ions distributed in the silica gel. The photoreaction was further observed, in the same spectral region, also with silica gel impregnated with ammoniacal solns. of  $PbCl_2$ ,  $CdCl_2$ , and  $AgCl$ , which do not absorb in that region; to obtain the same d. of color, it was necessary to expose with  $PbCl_2$  4 times, and with  $CdCl_2$  10 times as long as with  $TiCl_3$ . With  $AgCl$ , blackening precedes the appearance of II, but remains const. after a while, whereas the intensity of the yellow color increases;

evidently, pptn. of metallic Ag takes place in the few individual microcrystals of AgCl, whereas the photochemical reaction which produces II occurs in ionic Ag<sup>+</sup> centers which give rise to no blackening. Adsorbates of pyridine on films of ZnCl<sub>2</sub> and SnCl<sub>4</sub> on quartz gave no photochemical reaction, nor was a reaction observed with KCl, CuCl, HgCl<sub>2</sub>, and AlCl<sub>3</sub>. No reaction was found with adsorbates of pyridine on powders of MgO, TiO<sub>2</sub>, ZnO, and PbO; the latter, evapd. in vacuo, had a yellow color of its own which disappeared after illumination of the pyridine adsorbate. That Cl has no part in the production of II is shown by the absence of an effect (other than darkening as a result of discoloration) with a HgCl<sub>2</sub> film, in contrast to the weakly pos. reaction found on illumination of an adsorbate of pyridine on silica gel + Hg<sup>++</sup>. Finally, illumination of the pyridine adsorbate on silica gel + AgCl with blue (instead of ultraviolet) light while it did result in blackening (as in the absence of pyridine), gave no photochemical reaction II. The kinetic order of the photochemical reaction was found, in the following way. With the same amt. of silica gel + TiCl<sub>4</sub> and with the amt. of pyridine admitted varied from 1 to 15, the time necessary to produce a spot of the same brightness varied from 90 to 6 min. Consequently, the product of time and concn. is approx. const., and the process is unimol., i.e. does not require the participation of a 2nd mol. of pyridine. The min. amt. of pyridine necessary for the appearance of II corresponds to coverage of about 0.1 sqm out of a sp. surface area of 300 sqm/g., this proves that the photochemical reaction involves only pyridine molecules adsorbed at the surface. Cooling to -180° of an adsorbate illuminated at room temp. resulted only in some weakening of the coloring effect, but not in its disappearance. Admission of gaseous NH<sub>3</sub> under 10 mm. resulted in immediate disappearance of the color; admission of air at room temp. had no effect. The phenomenon of production of II consists evidently in a photochemical reaction of the pyridine and transfer of the electron to the H<sup>+</sup> (or other metal ion), which acts as electron acceptor and thus stabilizes the pos. pyridine ion II. In that respect, the phenomenon is analogous to the transfer of an electron from the hydrate H<sub>2</sub>O to the metal ion in the

far-ultraviolet absorption of aq. salt solns. This view is borne out by the agreement of the observed order of effectiveness of the metal cations in the photochemical reaction II and their order with respect to the position of the max. of far ultraviolet absorption of their aq. solns.: Ti<sup>++</sup> 214, Ag<sup>+</sup> 210.5, Pb<sup>++</sup> 208.5, Cd<sup>++</sup> 190 mμ. It is further borne out by the observed ready occurrence of the photochemical reaction II on an adsorbate of pyridine on CeO<sub>2</sub> (powder) which is a very effective electron acceptor, as well as on silica gel impregnated with CeO<sub>2</sub>. Freytag's (loc. cit.) interpretation of the nature of I as a product of hydrolysis of pyridine, or its interpretation by Feigl and Anger (C. 28, 2334) as the NH<sub>4</sub> salt of that product, fails to account satisfactorily of the reaction. It appears plausible that I and II have a common origin, with the primary reaction consisting in both instances in the formation of a pos. pyridine ion. In the case of I, O<sub>2</sub> plays the role of the necessary electron acceptor. This primary reaction is followed and is complicated by partial reactions of oxidation and hydrolysis.

N. Thom

FIALKOVSKAYA, O.V.

Relation of Intensities of Spectral Emission Bands of Alkali-halide Phosphors Activated by Thallium."

Vest Leningrad U, Ser Mat, Fiz i Khim, No. 9, PP 111-119, 1952.

A description of expts to clarify influence of various factors characterizing the physical state of principal phosphor lattice on the spectral behavior of the activator impregnated into its particles, e.g., disintegration of a single crystal influences the emission spectrum of dislocations of the crystal lattice, which influence is manifested in the redistribution of the intensities among the emission bands; additional heating of diffused phosphor, thus ensuring deeper diffusion of activator into the lattice, reveals role played by depth of deposition of activator, concentration; and, as noted for the first time here, temp not only influences widening and displacement of spectral bands but also causes certain changes in the relation of their intensities.

252 T103

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000413010012-9  
USSR/Physical Chemistry - Molecules. Chemical Bonds.

Abs Jour: Ref Zhur-Khimiya, No 5, 1957, 14386

Author : O. V. Fialkovskaya

Inst :

Title : Absorption spectra of certain organic compounds adsorbed on potassium chloride

Orig Pub: Optika i spektroskopiya, 1956, 1, No 4, 595-597

Abstract: The closeness of the absorption spectra (AS) of benzene (I) and pyridine (II) adsorbed on KCl, to their AS in solid state at 180°C, as well as the reversibility of I & II sorption and desorption and the facility of their displacement by ammonia point to the physical character of adsorption; the same is observed for  $\alpha$ -picoline and chlorobenzene; whereas the character of the change in the aniline AS in adsorption on KCl and the latter's irreversibility are apparently dependent on the chemical nature of adsorption.

PIALKOVSKAYA, O.V.

PRIKHODKO, A.F.

24(7) p 3 PHASE I BOOK EXPLOITATION 80V/1365

L'vov. Universitet

Materialy I Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Itsi Fizichnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Jaxer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Lavistserg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabelinskiy, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.J., Candidate of Physical and Mathematical Sciences, and Olsbergman, A. Ye., Candidate of Physical and Mathematical Sciences.

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Klimenko, P.L., and O.V. Pialkovskaya. Infrared Radiation Polarizers	407
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"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413010012-9

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000413010012-9



FIALKOVSKAYA, O.V.

Infrared absorption spectra used for studying the processing products of crude benzene, light fractions of shale casing-head gasoline, and oils. Trudy kom. anal. khim. 8:236-242 '58.

(MIRA 11:8)

1. Institut fiziki Akademii nauk USSR.  
(Petroleum products--Analysis)

AUTHOR: Fialkovskaya, O. V.

SOV/48-22-9-21/40

TITLE: ~~Infrared~~ Absorption and Heat Emission Spectra of Some  
Molecular Compounds in Different States of Aggregation  
(Infrakrasnyye spektry pogloshcheniya i teplovogo izlucheniya  
nekotorykh molekulyarnykh soyedineniy v razlichnykh  
agregatnykh sostoyaniyakh)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958,  
Vol 22, Nr 9, pp 1093 - 1096 (USSR)

ABSTRACT: The author studied the infrared absorption spectra  
of naphthalene, of anthrazene and of phenantrene in  
the range of the fundamental intramolecular oscillations  
(700 - 1500  $\text{cm}^{-1}$ ) in different states of aggregation.  
This investigation was not limited to the ordinarily  
found states, the gaseous and the crystalline one, but  
also incorporated studies of solutions, of the molten,  
and the polycrystalline state at varying temperatures.  
This last type of experiment permitted to trace the  
process of the formation of new absorption lines which  
develop due to the aggregation of the molecules into a

Card 1/3



Infrared Absorption and Heat Emission Spectra of Some Molecular Compounds in Different States of Aggregation SOV/48-22-9-21/40

crystal. Thus the nature of individual bands was determined and the phenomenon of heat emission of crystals was discovered. Natural and polarized light was used in a temperature range of from  $-231$  to  $+220^{\circ}$ . The absorption spectra were all obtained under completely identical experimental conditions and in some cases even with the same layer thickness. A Perkin-Elmer spectrometer Model 12C, was used. The systematic occurrence of satellite lines in an almost equal and small distance ( $24\text{ cm}^{-1}$ ) from the ground lines of intramolecular absorption and their specific behaviour in polarized light indicates that they are produced by the interaction between the lattice vibrations and the intramolecular oscillations. As regards the highly polarized bands at  $726\text{ cm}^{-1}$  (in the b-component) and at  $742\text{ cm}^{-1}$  (in the a-component) they are obviously due to excitons. In the investigation of the absorption spectra of the anthracene melt a heat radiation originating from it was discovered (Fig 3). This spectrum consists of a number of emission lines the maxima of which coincide

Card 2/3

Infrared Absorption and Heat Emission Spectra of Some Molecular Compounds in Different States of Aggregation SOV/48-22-9-21/40

with the maxima of the absorption bands in compliance with Kirchhoff's law (Kirkhgoff). There are 3 figures, 1 table, and 4 references, 3 of which are Soviet.

ASSOCIATION: Institut fiziki Akademii nauk USSR (Institute of Physics, AS UkrSSR)

Card 3/3

24(7)

SOV/48-23-1-12/36

AUTHOR: Fialkovskaya, O. V.

TITLE: ~~Thermal Radiation~~ of Naphthalene, Anthracene and Phenanthrene Within the Infrared Range of the Spectrum (Teplovoye izlucheniye naftalina, antratsena i fenantrena v infrakrasnoy oblasti spektra)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 1, pp 62 - 65 (USSR)

ABSTRACT: In studying the absorption spectrum of monomolecular crystals at high temperatures the author detected thermal radiation in a previous work (Ref 1). On the basis of a number of maxima she assumed the presence of thermal radiation within the infrared range of the spectrum. The radiation and absorption spectra were photographed under equal conditions. In investigating the thermal radiation only a careful heat insulation was necessary. The investigation covered the heat-radiation and absorption spectra of the melt and crystal of anthracene at 20° and 200° (Fig 1), those of the naphthacene melt at 90, 110, 115 and 135° (Fig 2) as well as those of the naphthalene melt at 90, 100, 120, 160

Card 1/2

Thermal Radiation of Naphthalene, Anthracene and Phenanthrene Within the Infrared Range of the Spectrum

SOV/48-23-1-12/36

and  $180^{\circ}$  (Fig 3). In every substance bands were detected which are characteristic of thermal radiation and correspond to the thermal excitations of molecular oscillations. The maxima appear, in accordance with Kirchhoff's law, at the same wave lengths as those of absorption bands. The intensities could not be compared to each other since the spectra were photographed at different widths of slit. In addition, the author investigated the influence of the layer thickness ( $d=10, 50$  and  $100\mu$ ) for naphthalene at  $100^{\circ}$  (Fig 4). It may be seen from the figure that the intensities of the individual bands increase with growing thickness. Finally, it is stated that thermal radiation begins at  $40-50^{\circ}$  and is suitable to the study of the natural vibration of the substances. Kopf (Ref 2), the laboratory of the Academician Terenin, Yaroslavskiy and Aleksandrov (Ref 3) are mentioned as discoverers of similar kinds of thermal radiation.

There are 4 figures and 3 references, 2 of which are Soviet.

Card 2/2

Card 1/1

92

L 33583-66 EWT(m)/EWP(j) RM

ACC NR: AR6016207

SOURCE CODE: UR/0058/65/000/011/D037/D037

AUTHOR: Fialkovskaya, O. V.

TITLE: Influence of deuterization on the vibrational absorption spectrum of naphthalene

SOURCE: Ref. zh. Fizika, Abs. 11D291

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 67-69

TOPIC TAGS: naphthalene, deuterium, absorption spectrum, spectral analysis, crystal symmetry

ABSTRACT: A comparative analysis of the spectra of naphthalene  $C_{10}H_8$  and octa-deuteronaphthalene  $C_{10}D_8$  shows no change in the spectrum but only a change in the magnitude of the vibrational frequencies of the spectrum. Comparison of the spectra of naphthalene and monodeuteronaphthalene  $C_{10}H_7D$  has disclosed a whole number of singularities which apparently are the consequence of the difference in symmetry of the component molecules of the crystals. It is found that the vibrational spectra of a mixture of  $C_{10}H_8$  and  $C_{10}D_8$  crystals have the property that the spectra of the two components are additive. [Translation of abstract]

SUB CODE: 20

Card 1/1

FIALKOVSKAYA, O.V.

Infrared absorption spectrum of anthracene in polarized light for the  
three basal crystallographic faces at 20°K. Opt. i spektr. 17 no.3:397-  
401 S '64. (MIRA 17:10)

NEFEDOV, A.V. [Nefedov, O.V.]; FIALKOVSKAYA, O.V. [Fialkovs'ka, O.V.]

Vibration spectrum of pyrene and its interpretation. Ukr. fiz. zhur.  
10 no.4:416-419 Ap '65. (MIRA 18:5)

1. Institut fiziki AN UkrSSR, Kiyev.

NEFEDOV, A.V. [Nefedov, O.V.]; FIALKOVSKAYA, O.V. [Fialkovs'ka, O.V.];

Interpretation of the vibrational spectrum of thiourea. Ukr.  
fiz. zhur. 10 no.7:778-780 J1 '65. (MIRA 18:8)

1. Institut fiziki AN UkrSSR, Kiyev.



NEFEDOV, A.V. [Nefedov, O.V.]; FIALKOVSKAYA, O.V. [Fialkovs'ka, O.V.]

Vibrational spectrum of an acenaphthene single crystal and its comparison with spectra of molecules of similar structure.

Ukr. fiz. zhur. 10 no.8:885-893 Ag '65. (MIRA 18:8)

1. Institut fiziki AN UkrSSR, Kiyev.

TIALKOVSKAYA, R. P.		PROCESS AND PROPERTIES INDEX																																																																																																																									
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<p>New method of manufacturing small caliber paraboloid reflectors. Z. I. BRONKHIN AND R. P. FIALKOVSKAYA. <i>Sokolovskaya Keram. Prom.</i>, 1946, No. 1-2, pp. 8-11. The method consists essentially in heating a glass disk in a cast-iron cup having a parabolic shaped bottom. The cup is heated to 250°C in an electric furnace and then removed, and the inside is coated by spraying with a clay suspension (kaolin passing through a sieve having 2500 openings per cm<sup>2</sup> and diluted to give 50 gm. clay per 150 cc. water) or by rubbing with lump graphite. The cup is then heated to 650° and removed, the glass disk is centered in the cup, and the cup is again heated to 650°. After 10 min. at 650° the furnace is cooled following the annealing curve for Fourcault glass of the given thickness. When the temperature reaches 300°, the reflector is removed and placed in a heated asbestos box. The glass disk is cut from high grade Fourcault glass which must be free of all defects</p>		<p>that lower the optical and thermal properties of the reflector. The disk should not be thicker than 4 to 4.5 mm and should be as close to the size of the reflector as possible (for a 250-mm reflector, the disk was 272 mm). The convex side of the reflector is ground to remove a layer of about 0.1 to 0.15 mm and given a final polish. The graphite offers greater protection to the cup surface than does the clay suspension, but the former must be renewed every 5 to 8 days while the latter will last for 1.5 to 2 months of continuous operation of the cup. Reflectors made by this process had an average coefficient of reflection of 0.85, average focal distance of 100±1 mm, and aberration deviations up to 2 mm. The operations of silvering, coppering, and applying protective coatings remained the same. This process has proved successful in the manufacture of reflectors 250, 350, 400, and 450 mm in diameter. B. Z. K.</p>																																																																																																																									
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FIALKOVSKAYA, T., kand.tekhn.nauk

When an article is being painted... Okhr.truda i sots.strakh. 3  
no.3:65-67 Nr '60. (MIRA 13:7)  
(Spray painting)

FIALKOVSKAYA, Tat'yana Andreyevna; SHIFMAN, Gerasim Moiseyevich; DENISOVA,  
~~I.S.~~, redaktor; KIRSANOVA, N.A., tekhnicheskiiy redaktor

[Improving working conditions for paint sprayers in the machine  
building industry] Ozdorovlenie uslovii truda pri pul'verizatsion-  
noi okraske v mashinostroenii. [Moskva] Izd-vo VTsSPS Profizdat,  
1954. 133 p. (MLRA 8:7)  
(Spray painting) (Machinery industry)

PIALKOVSKIYA, T.; MOSOLOV, N.; DOMITREY, L.

Ventilation of chambers used for motor-vehicle painting.  
Avt.transp. 39 no.10:27-29 O '61. (MIRA 14:10)  
(Motor vehicles—Painting)

AKSENOV, N.D., kand. tekhn. nauk; FIALKOVSKAYA, T.A., kand. tekhn.  
nauk, retsenzent; SARANTSEV, Yu.S., inzh., red.

[Labor safety in painting large objects] Okhrana truda pri  
okraske krupnogabaritnykh izdelii. Moskva, Mashinostroenie,  
1965. 129 p. (MIRA 18:4)

FIALKOVSKAYA, Ye. A.

"Problems in Improving the Resistance of Wheat to Loose Smut", UNIZR, Khar'kov, 1934.

1. FIALKOVSKAYA, YE. A.
2. USSR (677)
7. "Ways of Making Alfalfa Healthy with Respect to the Chief Airborne Diseases", Trudi Institutu Genetiki i Seleksii (Works of the Institute of Genetics and Selection), Vol 1, 1951, pp 151-180.
9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.



USSR / Plant Diseases. Diseases of Cultivated Plants.

0

Abstr Jour : Ref Zhur - Biologiya, No 22, 1958, No. 100562

Author : ~~Tialkovskaya, Ye. A.~~

Instit : Ukrainian Scientific Research Institute of Plant Cultivation, Selection and Genetics

Title : Determination of the Resistance in Wheat Against Loose Smut During the Early Stages of Infection

Orig Pub : Byul. Ukr. n.-i. in-ta rasteniyevodstva, selekts. i. genet., 1958, No 2, 117-120

Abstract : On the basis of comparative data from 1954 and 1956 on account of spores which had germinated on the stigma of the flowers, and on the incidence of infection in the field in wheat varieties Lyuteitsens 62, Odesskaya 13, Narodnaya, Gordeiforme 48 -2 and Timofeyev Triticum, the conclusion may be drawn that it is feasible to determine the resistance of these varieties to smut by the intensity of the

Card 1/2

Card 2/2

FIALKOVSKAYA, Ye.A. [Fialkova 'ka, O.O.]; SLADKOMEDOVA, A.I. [Sladkomedova, O.I.];  
SHMATOVA, M.N. [Shmatova, M.M.]

Formation of the resistance to rust and smuts in winter and spring  
wheat hybrids. Trudy Inst. gen. i sel. AN URSR 5:56-62 '58.

(MIRA 11:9)

(Wheat--Disease and pest resistance) (Uredineae) (Smute)

FIALKOWSKI, Stanisław

Experimental studies of incorporation of autografts under the influence of pharmacologically induced active hyperemia. Chir. narząd. ruchu ortop. Pol. 28 no.7:851-853 '63

1. Z Kliniki Ortopedycznej 2 CSK Wojskowej Akademii Medycznej w Warszawie (Kierownik: prof. dr. M. Garlicki).

FIALKOVSKIY, Aleksandr Makarovich,; FERBEROV, Leonid Yakovlevich,; KUZNETSOV,  
K.K., otv. red.; SUROVA, V.A., red. izd-va,; SHKLYAR, S.Ya., tekhn. red.

[Handbook of materials regulating the establishing of standards  
for the determination of estimated costs of construction in the  
coal industry] Spravochnik deistvuiushchikh normativnykh dokumentov  
dlia opredeleniia smetnoi stoimosti stroitel'stva v ugol'noi  
promyshlennosti. Moskva, Ugletekhizdat, 1958. 47 p. (MIRA 11:12)  
(Coal)  
(Building--Estimates)

FIALKOVSKIY A.M.

AGALINA, M.S., inzh.; AKUTIN, T.K., inzh.; APRESOV, A.M., inzh.; ARISTOV, S.S., kand. tekhn. nauk.; BELOSTOTSKIY, O.B., inzh.; BERLIN, A.Ye., inzh.; BESSKIY, K.A., inzh.; BLYUM, A.M., inzh.; BRAUN, I.V., inzh.; BRODSKIY, I.A., inzh.; BURAKAS, A.I., inzh.; VAYNMAN, I.Z., inzh.; VARSHAVSKIY, I.N., inzh.; VASIL'YEVA, A.A., inzh.; VORONIN, S.A., inzh.; VOYTSEKHOVSKIY, L.K., inzh.; VRUBLEVSKIY, A.A., inzh.; GERSHMAN, S.G., inzh.; GOLUBYATNIKOV, G.A., inzh.; GOHLIN, M.Yu., inzh.; GRAMMATIKOV, A.N., inzh.; DASHEVSKIY, A.P., inzh.; DIDKOVSKIY, I.L., inzh.; DOBROVOL'SKIY, N.L., inzh.; DROZDOV, P.F., kand. tekhn. nauk.; KOZLOVSKIY, A.A., inzh.; KIRILENKO, V.G., inzh.; KOPELYANSKIY, G.D., kand. tekhn. nauk.; KORETSKIY, M.M., inzh.; KUKHARCHUK, I.N., inzh.; KUCHER, M.O., inzh.; MERZLYAK, M.V., inzh.; MIRONOV, V.V., inzh.; NOVITSKIY, G.V., inzh.; PADUN, N.M., inzh.; PANKRAT'YEV, N.B., inzh.; PARKHOMENKO, V.I., kand. biol. nauk.; PINSKIY, Ye.A., inzh.; POULUBNYI, S.A., inzh.; PORAZHENKO, F.F., inzh.; PUZANOV, I.G., inzh.; REDIN, I.P., inzh.; REZNIK, I.S., kand. tekhn. nauk.; ROGOVSKIY, L.V., inzh.; RUDERMAN, A.G., inzh.; RYBAL'SKIY, V.I., inzh.; SADOVNIKOV, I.S., inzh.; SEVER'YANOV, N.N., kand. tekhn. nauk.; SEMESHKO, A.T., inzh.; SIMKIN, A.Kh., inzh.; SURDUTOVICH, I.N., inzh.; TROFIMOV, V.I., inzh.; PEFER, M.M., inzh.; FIALKOVSKIY, A.M., inzh.; FRISHMAN, M.S., inzh.; CHERESHNEV, V.A., inzh.; SHESTOV, B.S., inzh.; SHIFMAN, M.I., inzh.; SHUMYATSKIY, A.F., inzh.; SHCHERBAKOV, V.I., inzh.; STANCHENKO, I.K., otv. red.; LISHIN, G.L., inzh., red.; KRAVTSOV, Ye.P., inzh., red.; GRIGOR'YEV, G.V., red.; KAMINSKIY, D.N., red.; KRASOVSKIY, I.P., red.; LEYTMAN, L.Z., red. [deceased]; GUREVICH, M.S., inzh., red.; DANILEVSKIY, A.S., inzh., red.; DEMIN, A.M., inzh., red.; KAGANOV, S.I., inzh., red.; KAUFMAN, B.N., kand. tekhn. nauk., red.; LISTOPADOV, N.P., inzh., red.; MENDELEVICH, I.R., inzh., red. [deceased];  
(continued on next card)

AGALINA, M.S.... (continued) Card 2.

PENTKOVSKIY, N.I., inzh., red.; ROZENBERG, B.M., inzh., red.; SLAVIN, D.S., inzh., red.; FEDOROV, M.P., inzh., red.; TSYMBAL, A.V., inzh., red.; SMIRNOV, L.V., red. izd-va.; PROZOROVSKAYA, V.L., tekhn. red.

[Mining ; an encyclopedic handbook] Gornoe delo; entsiklopedicheskiy spravochnik. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po ugol'noi' promyshl. Vol. 3. [Organization of planning; Construction of surface buildings and structures] Organizatsiya proektirovaniya; Stroitel'stvo zdaniy i sooruzheniy na poverkhnosti shakht. 1958. 497 p. (MIRA 11:12)  
(Mining engineering)  
(Building)

LYUL'KO, Yefrem Vladimirovich; MONIN, Grigoriy Il'ich; FIALKOVSKIY,  
Aleksandr Makarovich; SANOVICH, P.O., otv.red.; CHEKHOVSKAYA,  
T.P., red.izd-va; PROZOROVSKAYA, V.L., tekhn.red.; SHKLYAR,  
S.Ya., tekhn.red.

[Standard practices for mine construction estimates] Smetnaia  
dokumentatsiia dlia stroitel'stva shakht. Moskva, Gos.nauchno-  
tekhn.izd-vo lit-ry po gornomu delu, 1960. 352 p.

(Mining engineering)

(MIRA 13:9)

KUZNETSOV, K.K., inzh.; FIALKOVSKIY, A.M., inzh.

Simplifying documentation of estimates and costs for work completed. Shakht. stroi. 5 no.7:7-8 JI '61. (MIRA 15:6)

1. Vsesoyuznyy tsentral'nyy gosudarstvennyy institut po proyektirovaniyu i tekhniko-ekonomicheskim obosnovaniyam razvitiya ugol'noy promyshlennosti.

(Mining industry and finance--Accounting)



FIALKOVSKIY, A.T.

Diffraction of plane electromagnetic waves on a slot and  
on a tape. Radiotekh. i elektron. 11 no. 2:178-186 F '66  
(MIRA 19 :2)

1. Submitted October 9, 1964.

ACC NR: AP6018738

SOURCE CODE: UR/0057/66/036/006/1100/1108

49  
48  
5

AUTHOR: Fialkovskiy, A.T.

ORG: Institute of Physical Problems, AN SSSR, Moscow (Institut fizicheskikh problem AN SSSR)

TITLE: Open resonators formed by plane mirrors, with discontinuous impedance near the edges

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6, 1966, 1100-1108

TOPIC TAGS: resonator, open resonator, resonator Q factor, electromagnetic wave reflection, electromagnetic wave diffraction, waveguide

ABSTRACT: The author employs the Wiener-Hopf method and approximation and factorization techniques discussed elsewhere by L.Vaynshteyn (ZhETF, 44, 3, 1050-1065, 1963) to calculate the reflection coefficient at a waveguide insert and at a discontinuity of the wall impedance of a waveguide, and to calculate the frequency spectrum and the Q-factors of the different modes of an open resonator of which each of the two mirrors is bordered by a band in which the surface impedance is altered or in which the plane of the reflecting surface is parallel to but not coincident with the plane of the main reflecting surface. The open resonator calculations are presented in some detail only for the two dimensional case in which one of the dimensions of the rectangular

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UDC: 538.56

L 41236-66

ACC NR: AP6018738

mirror is infinite. Calculations were performed for three dimensional resonators with rectangular or circular mirrors; the results are discussed briefly, but the calculations themselves are not adduced because of their complexity. It is shown that bordering the mirrors with bands of altered impedance not only shifts the resonant frequencies somewhat, but also considerably increases the Q-factors of some of the modes and reduces the Q-factors of others. Under certain conditions the enhancement of the Q-factor can be very great, and it is suggested that open waveguides with bordered reflecting walls may be useful for microwave transmission in the millimeter wavelength range. The author thanks L.A.Vaynshteyn for suggesting the problem and for guidance. Orig. art. has: 40 formulas and 6 figures.

SUB CODE: 20,09/

SUBM DATE: 05Jul65/

ORIG. REF: 004/ OTH REF: 003

Card 2/2 MLP

ACC NR: AP6018739

SOURCE CODE: UR/0057/66/036/006/1109/1114

AUTHOR: Fialkovskiy, A.T.

ORG: Institute of Physical Problems, AN SSSR, Moscow (Institut fizicheskikh problem)  
AN SSSR)

TITLE: Coupled oscillations of open resonators with plane mirrors and diffraction coupling

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6, 1966, 1109-1114

TOPIC TAGS: resonator, open resonator, resonator Q factor, electromagnetic wave diffraction, coupled resonators

ABSTRACT: Mathematical techniques presented elsewhere by L.A. Vaynshteyn (ZhETF, 44, 3, 1050-1065, 1963) and in the preceding paper by the author (ZhETF, 34, 1100, 1966/ see Abstract AP6018738/) are employed to discuss the oscillations of two open resonators coupled by diffraction at a common mirror. The calculations are presented for the two-dimensional case in which the end mirrors of the two resonators occupy the planes  $y = d_1$  and  $y = d_2$  of a Cartesian coordinate system  $x, y, z$ , and the common mirror occupies the region  $y = 0, -L < x < L$ , but they can be generalized to the three-dimensional case of a rectangular or a circular mirror between two parallel planes. The effect of finite thickness (in the  $y$ -direction) of the common mirror is discussed. Formulas are given for the frequencies and Q-factors of the normal modes of the coupled resonators. There are coupled modes with high Q-factors. It is shown that by

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UDC: 538.56

L 41235-66

ACC NR: AP6018739

inserting a coupling mirror midway between the two mirrors of an open resonator, thereby forming a pair of coupled resonators, one increases the Q-factors of corresponding modes by a factor of 1.7. Finite thickness of the common mirror somewhat reduces the Q-factors and gives rise to additional modes, whose Q-factors, however, are low. The author thanks L.A.Vaynshteyn for suggesting the problem and for guidance. Orig. art. has: 25 formulas and 4 figures.

SUB CODE: 20 / SUBM DATE: 05Jul65/ ORIG.REF: 004 / OTH REF: 001

Card

2/2 MLP

L 09375--67 EWT(1) GG

ACC NRI AP6023206

SOURCE CODE: UR/0020/66/168/006/1300/1302

AUTHOR: Fialkovskiy, A. T. 34

ORG: Institute of Physics Problems im. S. I. Vavilov, Academy of Sciences SSSR (Institut fizicheskikh problem Akademii nauk SSSR)

TITLE: Contribution to the theory of open resonators made up of parallel discs

SOURCE: AN SSSR. Doklady, v. 168, no. 6, 1966, 1300-1302

TOPIC TAGS: cavity resonator, resonator Q factor, electromagnetic wave reflection

ABSTRACT: The author considers resonators consisting of two discs facing each other and spaced a distance  $2l$  apart, with  $kl \geq 1$  ( $k = \omega/c$  is the wave number). The calculations for such resonators are based on the assumption that the electromagnetic fields are reflected from their edges at frequencies close to cutoff, and that the reflection coefficient is the same as for the open end of a flat waveguide. The impedance boundary conditions on the periphery of the resonator are derived and it is shown that the behavior of such a resonator is not sensitive to the ratio of the disc diameter to the distance between discs, and that for each such ratio there exists a separate spectrum of high-Q oscillations. The amplitudes excited in the resonator are calculated for the case when a plane wave is incident on one of the discs in normal direction and the discs do not have high transparency. The author thanks L. A. Vaynshteyn for suggesting the topic and guidance. This report was presented by Academician V. A. Fok 16 October 1965. Orig. art. has: 2 figures and 16 formulas.

SUB CODE: 09, 20 / SUBM DATE: 28Sep65 / ORIG REF: 002

Card 1/1 LL

UDC: 621.373.413

*File 100511, 1A*

ALFEROV, A.A.; ARTEMKIN, A.A.; ASHKENAZI, Ye.A.; VINOGRADOV, G.P.; GALEYEV, A.U.; GRIGOR'YEV, A.N.; D'YACHENKO, P.Ye.; ZALIT, N.N.; ZAKHAROV, P.M.; ZOBNIN, N.P.; IVANOV, I.I.; IL'IN, I.P.; KMETIK, P.I.; KUDRYASHOV, A.T.; LAPSHIN, F.A.; MOLYARCHUK, V.S.; PERTSOVSKIY, L.M.; POGODIN, A.M.; RUDOV, M.L.; SAVIN, K.D.; SIMONOV, K.S.; SITKOVSKIY, I.P.; SITNIK, M.D.; TETEREV, B.K.; TSETYRKIN, I.Ye.; TSUKANOV, P.P.; SHADIKYAN, V.S.; ADELUNG, N.N., retsenzent; AFANAS'YEV, Ye.V., retsenzent; VIASOV, V.I., retsenzent; VOROB'YEV, I.Ye., retsenzent; VORONOV, N.M., retsenzent; GRITCHENKO, V.A., retsenzent; ZHEREBIN, M.N., retsenzent; IVLIYEV, I.V., retsenzent; KAPORTSEV, N.V., retsenzent; KOCHUROV, P.M., retsenzent; KRIVORUCHKO, N.Z., retsenzent; KUCHKO, A.P., retsenzent; LOBANOV, V.V., retsenzent; MOROZOV, A.S., retsenzent; ORLOV, S.P., retsenzent; PAVLUSHKOV, E.D., retsenzent; POPOV, A.N., retsenzent; PROKOF'YEV, P.F., retsenzent; RAKOV, V.A., retsenzent; SINEGUBOV, N.I., retsenzent; TEREIN, D.F., retsenzent; TIKHOMIROV, I.G., retsenzent; URBAN, I.V., retsenzent; FIALKOVSKIY, I.A., retsenzent; CHEPYZHEV, B.F., retsenzent; SHEBYAKIN, O.S., retsenzent; SHCHERBAKOV, P.D., retsenzent; GARNYK, V.A., redaktor; LOMAGIN, N.A., redaktor; MORDVINKIN, N.A., redaktor; NAUMOV, A.N., redaktor; POBEDIN, V.F., redaktor; RYAZANTSEV, B.S., redaktor; TVERSKOY, K.N., redaktor; CHEREVATYY, N.S., redaktor; ARSHINOV, I.M., redaktor; BABELYAN, V.B., redaktor; BERNGARD, K.A., redaktor; VERSHINSKIY, S.V., redaktor; GAMBURG, Ye.Yu., redaktor; DERIBAS, A.T., redaktor; DOMEROVSKIY, K.I., redaktor; KORNEYEV, A.I., redaktor; MIKHEYEV, A.P., redaktor

(Continued on next card)

ALPEROV, A.A. ---- (continued) Card 2.

MOSKVIN, G.N., redaktor; RUBINSHTEYN, S.A., redaktor; TSYPIN, G.S.,  
redaktor; CHERNYAVSKIY, V.Ya., redaktor; CHERNYSHEV, V.I., redaktor;  
CHERNYSHEV, M.A., redaktor; SHADUR, L.A., redaktor; SHISHKIN, K.A.,  
redaktor

[Railroad handbook] Spravochnaia knizhka zheleznodorozhnika, Izd.  
3-e, ispr. i dop. Pod obshchei red. V.A.Garnyka. Moskva, Gos.  
transp.zhel-dor. izd-vo, 1956. 1103 p. (MLRA 9:10)

1. Nauchno-tekhnikeskoye obshchestvo zheleznodorozhnogo transporta.  
(Railroads)



1 38735-06 T/EMP(1) JUP(c) CC/ER  
ACC NR: AP6017912 (A) SOURCE CODE: PQ/0095/65/013/11-/0015/0022

AUTHOR: Fialkowski, K. R.—Fialkovskiy, K. R. 43

ORG: Department of Computing Machines, Technical University, Warsaw (Katedra budowy maszyn matematycznych, Politechnika)

TITLE: Properties and utilization of pseudosystematic weight codes 160

SOURCE: Polska akademia nauk. Bulletin. Serie des sciences techniques, v. 13, no. 11-12, 1965, 15-22

TOPIC TAGS: weight code, ~~pseudosystematic weight code~~, binary code, digital computer, algorithm, arithmetic unit, adder, complement code

ABSTRACT: The author examines the properties of a class of weight codes which he terms pseudosystematic; it includes the conventional 2's complement code, the minus two code, and other codes. The article shows that the numbers represented in a pseudosystematic code of maximum length can be put in an arithmetic progression. The original article includes a diagram giving the properties of the pseudosystematic codes and a table listing pseudosystematic codes actually and by working computers. The author describes in detail the code which he terms the 2's complementary code (as distinct from the conventional 2's complementary code). Both have the same

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ACC NR: AP6017912

useful properties, and moreover, multiplication in the  $\bar{2}$ 's complement code is closed. The author presents and proves algorithms of arithmetic operations for the  $\bar{2}$ 's complement code. It follows from these algorithms that the complement adder of the conventional 2's complement code can be used to perform  $\bar{2}$ 's complement additions. The arithmetic unit for the  $\bar{2}$ 's complement does not need any supplementary shift equipment as compared to the unit in which the conventional 2's complement code is used. The article was presented by Y. Groszkowski on 29 August 1965. Orig. art. has: 26 formulas, 1 figure, 1 table. [GC]

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 008/ OTH REF: 005

Card 2/2

**FIALKOVSKIY, N.K.; SKVARIK, V.P.**

Heels made of glued wood. Leg.prom. 16 no.12:49 D '56. (MLRA 10:2)  
(Kiev--Shoe industry)

*Fialkovskiy, P.G.*

AUTHOR: Fialkovskiy, P.G., Engineer

99-5-8/11

TITLE: Planning of Melioration Measures in the German Democratic Republic (Proyektirovaniye meliorativnykh meropriyatiy v Germanskoy Demokraticheskoy Respublike)

PERIODICAL: Gidrotekhnika i Melioratsiya, 1957, # 5, p 47-54 (USSR)

ABSTRACT: The methods of planning drainage systems in the German Democratic Republic differ in several points from those applied in the USSR. Perspective planning of melioration projects in the GDR is based on the entire territory of the state, and takes into consideration questions pertaining to hydro-economics, drainage, irrigation, water supply, erosion control, waterways, fishing industry, etc. Deviating from the methods applied in the USSR, perspective planning in the GDR is carried out in conjunction with field research with the aid of large-scale topographic and soil maps. The method of dividing the GDR into districts for the study of meteorological and soil conditions is more practical than the method used in the USSR. Of considerable interest is the German method for establishing the relative profitableness of melioration projects, based on the relative value of grown crops to the nutritious value of cereals (by Berman and Abo). Drainage systems in the GDR differ

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99-5-8/11

"Planning of Melioration Measures in the German Democratic Republic"

from systems in the USSR insofar, as they are shorter and of less expensive materials. In addition, local economic conditions are taken into consideration at their construction. In the GDR mainly underground drainage systems of earthenware (clay) pipes are used for heavy soils whereby no auxiliary furrowing of the surface is required, a practice advocated for the USSR. Tests conducted with mole drainage in Austria, Switzerland, and England have shown good results, and further experiments should be carried out regarding its durability and possibility to combine this system with the system of underground drain pipes. Effective drainage of swamps is accomplished in the GDR with open ditches. Sluices are installed to raise the water table during the vegetation period. Polders with 400-450 hectares equipped with 1 pumping station each proved to be economical, as well as smaller units (20-100 hectares), not only in coastal regions but also in the valleys of large rivers where regulation work would be too expensive. The article contains 4 photographs, 1 diagram, and 1 figure.

AVAILABLE: Library of Congress

Card 2/2

FIALKOVSKIY, P.G.

AUTHOR: Fialkovskiy, P.G., Engineer

99-9-8/9

TITLE: "Sewage Irrigation in the German Democratic Republic" (Oroshe-  
niye: stochnymi vodami v germanskoy demokraticheskoy respublike)

PERIODICAL: "Gidrotekhnika i Melioratsiya", 1957, Nr 9, pp 53-56 (USSR)

ABSTRACT: The successful use of sewage for farming has developed into a special branch of melioration in east Germany, whereby only mechanical purification methods are being practiced. Best results were obtained with periodic irrigation, using from 80 to 400 cu m of sewage per hectare. The year around irrigation with an application of 15,000 - 30,000 cu m per hectare have resulted in heavy leaching of K, Ca and N, concentration of P and final sterility of the soil as soon as irrigation was discontinued. Experience gathered in east Germany has shown the high efficiency as well as the practicability of using sewage without biological purification for agricultural purposes. The author recommends that plans be prepared for the installation of sewage irrigation at all large cities of the USSR. Movable sprinkling devices which are used in east Germany are fit to be applied in the USSR on a large scale. The article contains 2 photographs, and 2 figures.

Card 1/2

FIALKOVSKIY, P. G., Cand Tech Sci (diss) -- "Problems of designing a drying system of agriculture". Moscow, 1959. 27 pp (Min Agric USSR, Moscow Inst of Water Economy Engineers im V. R. Vil'yams), 300 copies (KL, No 9, 1960, 126)

30(1)

AUTHOR:

Fialkovskiy, P.G., Engineer

SOV/99-59-11-9/15

TITLE:

Methods of Calculating the Moisture Balance of Drainage Projects

PERIODICAL:

Gidrotekhnika i melioratsiya, 1959, Nr 11, pp 38-46 (USSR)

ABSTRACT:

This article deals with methods of calculating the moisture balance of soil in drainage projects under various conditions. Several aspects of the problem and the many factors involved are discussed by the author, and a number of expressions for determining moisture balance derived. Basic to the author's approach to the problem is a quantitative analysis of moisture conditions in the project in order to obtain the necessary initial data and material for planning the project as well as checking the appropriateness of measures taken after drainage. Reference is made to the following works: G.N. Kamenskiy [Ref 5] on calculation of the movement of soil moisture; A.I. Ivitskiy [Ref 4] on the study of drainage norms; A.V. Lebedev [Ref 7] who, utilizing Kamenskiy's work, developed a method of

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SOV/99-59-11-9/15

Methods of Calculating the Moisture Balance of Drainage Projects

analysing soil moisture conditions in irrigated land, which, the author states, can also be used in connection with drainage projects; A.N. Kostyakov [Ref 6] and L.T. Abramov [Ref 1] on the theoretical calculation of the volume of flow of atmospheric precipitation falling on the project; A.N. Kostyakov, A.A. Cherkasov and A.M. Alpat'yev [Ref 3] on a method of determining the amount of rated water consumption on irrigated lands. There are 2 graphs, 1 diagram and 7 Soviet references.

ASSOCIATION: Rosgiprovodkhoz

Card 2/2

FIALKOVSKIY, P.G., kand.tekhn.nauk

Methods for draining swampy mineral soils in the Far East. Gidr. 1  
mel. 14 no.7:47-53 J1 '62.  
(MIRA 17:2)

ZBARZH, Ya.M., prof.; MUKHIN, M.V., prof.; UVAROV, V.M., prof.;  
KABAKOV, B.D., doktor med. nauk; ALEKSANDROV, N.M., dots.;  
KLEMENTOV, A.V., dots.; FIALKOVSKIY, V.V., dots.;  
MUKOVOZOV, I.N., kand. med. nauk; ~~CHUMINA~~, Yu.V., kand.  
med. nauk; RYNKEVICH, V.S., red.; LEBEDEVA, G.T., tekhn.red.

[Operative maxillofacial surgery] Operativnaia cheliustno-  
litsevaia khirurgiia. Leningrad, Medgiz, 1963. 358 p.

(FACE—SURGERY) (JAWS—SURGERY) (NECK—SURGERY)  
(MIRA 16:12)

FIALKOVSKIY, V. V.

Fialkovskiy, V. V. "On the problem of fixation of fragments of the lower maxilla during bone plastic," *Trudy Leningr. obl. gosnitalya dlya lecheniya invalidov Otechestv. voyny*, Leningrad, 1948, p. 55-60

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1942)